By Dr Oh Jen Jen, Editorial Board Member

Saving Hearts

Professor Anantharaman speaks on Heart Safe Singapore's initiatives, which included a recent seminar on 7 January 2006 (see page 10 for report), and the essentials of managing cardiac arrest.

OJJ: The turnout for the 7 January seminar 'Cardiac Arrest Management: The Essentials' was extremely encouraging. What conclusions can be drawn from this?

PROF ANANTHARAMAN: The good turnout that we had, viz. about 280 private practitioners in attendance, meant that this topic of cardiac arrest and initial management is something our colleagues in primary care are very concerned about. This is a valid issue and the national figures bear this out: approximately 75% of all cardiac arrests in Singapore (about 1,600 annually) occur in residential areas – predominantly in the HDB heartlands, including our GP clinics, dialysis centres, polyclinics, nursing homes, and also along the roadsides in residential neighbourhoods. It is possible that GPs may be called upon to resuscitate a collapsed person, so it is important that we, as doctors, be armed with the skills of CPR and defibrillation, because these clearly save lives. I am glad our colleagues in family practice turned up in such large numbers.

OJJ: Are there any figures available regarding the number of participants who have already placed confirmed orders for AEDs (automated external defibrillators) since 7 January?

PROF ANANTHARAMAN: We have no figures yet. However, I was told that quite a few doctors have been enquiring about the purchase of AEDs. In addition, the Singapore Medical Association is publicising the availability of such defibrillators on its website, including the various models and price range.

OJJ: One of the recurring issues raised during the panel discussion was that of cost: maintaining the AEDs, re-certification of CPR skills, time invested and clinical hours expended. How can these concerns be best addressed?

PROF ANANTHARAMAN: Cost will always be an issue. A few years ago, when we started giving annual talks on this topic – and the price of AEDs then were double the current rates – our GP colleagues felt that prices were steep and a 30 to 50% reduction would be just right. Today, prices have dropped by more than that proportion, yet calls for further deductions have not abated.

What should the ideal price be? There is no clear answer. What value do we place on saving a life? At a $2,000 purchase price with a maintenance cost of about $300 to $500 every two to three years, each doctor has to decide whether that is fair. Remember, only a few years ago, each AED cost between $6,000

Page 7 ►

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◀ Page 6 – Saving Hearts

to $10,000. I am sure prices will continue to fall, but at a slower pace.

Our GP colleagues tell us that they seldom encounter cardiac arrests. This is because most members of the public are under the impression that GPs are not adequately equipped to handle such cases, and resort to calling the SCDF or private ambulances rather than a family physician, so the patient is taken straight to the hospital. While this, by itself, is a rational choice, the current response times of our paramedics do not optimise survival. They have to navigate congested roads and high-rise buildings. It is not surprising that our survival rate for out-of-hospital cardiac arrests is currently relatively low.

Consider how different the situation may be if every GP clinic had an AED and a sign outside specifying so, and the public was educated about its life-saving capabilities. I am sure our HDB residents would then call their neighbourhood GP immediately in the event of a collapse at home. If this were the case, I believe our GPs would manage a significantly larger number of cardiac arrests with good results, and having an AED would have been well worth it.

OJJ: Is there a possibility of 'indirect reimbursement', where those certified can turn instructors and run their own CPR/AED courses, which can also result in decentralising and easier access to the public?

PROF ANANTHARAMAN: Yes. However, those who are trained in defibrillation will require additional training to become instructors. This is to ensure that standards of safety are maintained and instructional skills adequate. The National Resuscitation Council prescribes clear guidelines for all instructors in CPR and AED training. Prior to conducting courses independently, potential candidates need to teach under the supervision of a senior instructor at least three times to the latter's satisfaction. Only then will certification be granted. It is always better to be a safe instructor, so as to ensure that those we train – including members of the public – apply CPR and defibrillation techniques correctly to the victims' benefit. We believe in the axiom: "Only good CPR is better than no CPR at all."

To those who want to volunteer and become instructors, we say a warm "Welcome!" And yes, they will be able to obtain 'indirect reimbursement' through the fees they earn from teaching such courses. In addition, they win the respect of

Working Towards A 'Heart Safe' Singapore

Stormy weather failed to dampen the enthusiasm of approximately 300 general practitioners who thronged the College of Medicine Building's Auditorium on 7 January 2006.

The seminar on Cardiac Arrest Management, helmed by Prof V Anantharaman (Chairman, Division of Ambulatory and Clinical Support Services, Singapore General Hospital (SGH)), was part of a launch campaign for Heart Safe Singapore: a joint initiative by the Ministry of Health, Singapore Medical Association (SMA) and local emergency medicine specialists, which aims to strengthen the 'Chain of Survival', focusing primarily on cardiopulmonary resuscitation (CPR) skills and the use of automated external defibrillators (AEDs).

Following addresses by Guest-of-Honour Director of Medical Services Prof K Satku and SMA President Dr Lee Pheng Soon, cardiac arrest management updates were presented by Dr Marcus Ong and Clinical Associate Professor Lim Swee Han (Consultant and Head of Department respectively, SGH Department of Emergency Medicine).

Dr Ong's segment was especially sobering, as statistics collected from an ongoing CARE (Cardiac Arrest and Resuscitation Epidemiology in Singapore) study revealed an alarmingly low rate of bystander CPR and marked delays in activation of the Emergency Medical Services (EMS) system. Combined with the lack of early defibrillation (optimally effective if performed within 4 minutes from onset of ventricular defibrillation (VF)), the result is a dismal survival rate for local cardiac arrest victims (i.e. only 2%) compared to 20% for certain North American states.

With these factors emphasised, A/Prof Lim and Prof Anantharaman went into the theoretical aspects of CPR and AED use, before participants received hands-on practice via demonstrations by experienced instructors.

The seminar concluded with a stimulating panel discussion, where concerns were debated and addressed. It was evident that while many family physicians were keen to play their part in strengthening the 'Chain of Survival', a number of key areas still require further consideration (see interview with Prof Anantharaman). However, organisers remain optimistic that this initiative's goals can be achieved, and will continue to rally both fellow doctors and members of the public to help make a 'heart-safe Singapore' a brilliant reality. ■

Page 9 ▶

◀ Page 7 – Saving Hearts

members of the public for not only providing their medical services, but also passing vital life-saving skills to their fellow citizens.

OJJ: Another recurring question concerns the location of AEDs, with suggestions that these be stored at 24-hour venues like police stations. Would such a move be advisable? What are the advantages and disadvantages?

PROF ANANTHARAMAN: For AEDs to be truly effective, they need to be immediately available (preferably within a minute of the patient's collapse), then the chances of a successful resuscitation will be much greater. For this to be achieved, AEDs must be similar to fire extinguishers, which are located on every floor of HDB flats and public buildings. AEDs must be available in all GP clinics, shopping malls, MRT stations and even trains, hotels, airports and even private residences. Such an approach will also have the beneficial effect of really lowering the prices of AEDs, as well as their maintenance costs. More importantly, it will tremendously improve the survival rate of cardiac arrest victims.

For the information of our SMA Members, the Heart Safe Singapore Steering Committee will also be approaching hotels, local airports, train operators, shopping malls and grassroots organisations to push the AED message in the community, and train not only GPs and clinic staff, but people from all walks of life.

OJJ: With the opening of the integrated resorts (IR) within the next few years, having AEDs and trained personnel at the casino will no doubt gain significant importance. It was mentioned that security staff in Las Vegas are fully capable of performing defibrillation. Can Singapore attain a similar standard of care?

PROF ANANTHARAMAN: If Las Vegas can do it, so can we. We must believe in the quality of our human resources. I am confident that, with the active support of the local medical profession and the SMA, Singapore will be able to move rapidly to achieve the high survival rates that have become synonymous with Las Vegas casinos.

Just as we have the best airport, seaport, airline, and so on, we should also strive for the best survival rate for cardiac arrest victims. We should not allow temporary distractions such as cost issues sway us from achieving this goal. Nothing in life is for free, so let us adopt a professional approach to the current problem and commit ourselves to the first three links of the Chain Of Survival: Early Access, Early (and good) CPR and Early Defibrillation. Then we would have played our part as good doctors and good community citizens. ■